Employability Skills Influencing Quantity Surveying Graduates' Gainful Employment

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Basic/core competencies alone rarely translate into gainful employment for fresh graduates in today's highly competitive labour market. Accordingly, assessing employability skills desired in addition to basic/core competencies by employers of fresh graduates, has become the focus of researchers and education authorities of disciplines/majors. This study assessed the most influential employability skills for gainful employment of graduate Quantity Surveyors (QS). A questionnaire was self-administered to a sample of 108 QS consultancy firms. Statistical analysis was conducted using Pearson correlation and multiple regression. Results revealed industry interaction, self-motivation skills and entrepreneurial skills with respective standardized coefficient of 0.406, 0.341 and 0.215 to be employability skills most influential in addition to basic/core competencies, for gainful employment of QS graduates. As previous attempts to improve employability of QS graduates focused largely on basic/core competencies only, this finding present QS education authorities with most important skills to consolidate on other than core competencies in order to ensure QS graduates are gainfully employable. From a practical perspective, the study's findings can be used by quantity surveying education authorities as a basis to further consolidate their teaching plans and ensure fresh quantity surveying graduates are fully work ready and gainfully employable.

Keywords: Employability skills, basic/core competencies, quantity surveying, graduates

INTRODUCTION

Employability skills otherwise known as 21st century competencies refer to new generic skills needed for employability in the 21st century. They are transferable core skill groups that signpost essential functional & enabling knowledge, skills and attitudes required in the twenty-first century to function effectively on the job (Overtoom 2000; Chu *et al*., 2017; Khodier & Nessim, 2019). According to Karin (2022), 'employers value employability skills because they consider them as an indication of how an employee would get along with other team members and customers, including how efficiently they are likely to perform in their job and succeed in their career'.

Aside basic competencies, several other skills designated employability skills are being strongly considered by employers of fresh graduates in today's highly competitive and technology driven labour market. Appallingly, however, researches (Pitan, 2017; Attri and Kushwaha, 2018; Okunuga and Ajeyalemi, 2018; Herberta *et al*., 2020) have revealed that a mismatch exists between these employability skills required by employers of fresh graduates and the skills graduates possess at the time of graduation from higher educational institutions, leading to a significant reduction in their chances of acquiring a gainful employment. To resolve this concern, identifying and assessing employability skills desired in addition to basic competencies by employers of fresh graduates, has become the focus of researchers and education authorities of various disciplines/majors globally.

Early attempt to unravel employability skills desired in addition to basic competencies (Adebakin, Ajadi & Subair, 2015) focused broadly on skills sought by employers for fresh graduates generally. Specifically, analytic and problem solving, decision making, risk management, leadership, information & communication, team work, official communication, and English proficiency and literacy skills were shown to be employability skills required by employers for any category of fresh graduates. Understandably, however, as disciplines/majors are known to vary in numerous ways such as in terms of cultures of engagement (Brint *et al*., 2008; Simmons *et al*., 2017; Ahmadu *et al*., 2021), identifying and assessing employability skills required by employers for specific discipline/majors has now become the foreground of later researches.

Numerous attempts exist to sort out employability skills required by employers for a specific discipline/major. Pitan (2017) assessed the most important employability skills desired by employers of fresh graduates of social science, medical science, agricultural science, pure science, arts and engineering. Khodier and Nessim (2019) while noting employability skills as the root cause of the gap between Architecture education and the labour market, assessed the most important employability skills to be included in Architecture education teaching methods, to facilitate gainful employment from employers of fresh graduates of Architecture education. Also, Attri and Kushwaha (2018) evaluated employability skills and personality traits sought by employers of business management fresh graduates. Okunuga and Ajeyalemi (2018) assessed relevant skills demanded by chemistry graduate employers. Bhatti *et al*. (2022) assessed highly required employability skills for business graduates.

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While Moyo and Ozgit (2022) evaluated the most important employability skills required for tourism and hospitality management graduates.

Essentially, findings of these later researches clearly present education authorities of the respective disciplines/majors with precise employability skills needed to be incorporated in their teaching plans to make their graduates fully work ready and gainfully employable. Also, because the findings of these later researches are not generic, there is a clear scope for several other disciplines/majors to uncover employability skills desired in addition to basic competencies from employers of their fresh graduates. Against this backdrop, this study assessed the most influential employability skills for gainful employment of graduate quantity surveyors. Quantity surveyors play a crucial role in construction and existing attempts (Nkado, 2000; Nkado & Terry, 2001; Crafford & Smallwood, 2007; Oke and Ogunsemi, 2009; Ibrahim *et al*., 2010; Said *et al*., 2010; Dada & Jagboro, 2012; Dada & Jagboro, 2018; Oke *et al*., 2019; Chamikara *et al*., 2018; Chandramohan *et al*., 2020) to bridge the gap between quantity surveying education and industry in order to ensure its graduates are work ready and gainfully employable, focus largely on core/basic competencies only. This study contributes to these existing attempts by unraveling the employability skills specifically required in addition to core/basic competencies by fresh graduate quantity surveyor's employers. Quantity Surveying education authorities will thus be able to further ensure their graduates are fully work ready and gainfully employable by consolidating on the most important skills other than core/basic competencies.

LITERATURE REVIEW

Employability and Employability Skills

Employability involves having the capability to gain initial employment, maintain the employment and obtain new one if need be. Essentially, it is an individual's preparedness to engage in employment as regards; skills, knowledge, personal attributes, qualities, characteristics, professional behaviours and development, including situational factors at play which either support or constrain the individual's ability to enact career plans (Hillage & Pollard, 1998; Yorke, 2006; Adebakin, Ajadi & Subair, 2015; Reid & Kelestyn, 2022).

To become employable, employers generally see core competencies of a graduate as necessary, but not sufficient. According to (Shafie & Nayan, 2010; Kenayathulla *et al*., 2019), 'employers now emphasize on engaging workers who not only have basic academic skills such as reading, writing, science, mathematics, oral communication and listening, but also possess higher order thinking skills like learning, reasoning, thinking creatively, decision making and problem solving'. More and more, skills outside the subject area of a graduate's course of study in higher education, otherwise known as employability skills are demanded by employers (Brown & Hesketh, 2004; Yorke, 2006; Tomlinson, 2008; Scott *et al*., 2017). Chu *et al*. (2017) and Khodier & Nessim (2019) submits that these skills are categorized into: 'fundamental skills namely communication, information management, use of numbers, thinking and problem solving; personnel management skills namely demonstrating positive attitudes and behaviours, being responsible and adaptable, continuous learning and working safely and; team work skills namely participating in tasks and working with others'.

As there is a general consensus that employability should begin in high school, it has become important to determine what types of employability skill set are demanded of graduates by the industry (Lynch, 2000; Kenayathulla, Ahmad & Idris, 2019). Indeed, identifying and assessing employability skills required of graduates by employers has become the focus of researchers in recent times.

Employability Skills Reported in Previous Researches

Several employability skills traits deemed important to boost a graduate's employability and promote performance at work places have been reported in previous studies. Adebakin *et al*. (2015) profiled employability skills into analytic and problem solving skills, team working skills, English proficiency and literacy skills, ICT skills, leadership skills, official communication skills, decision making skills and risk management skills. However, Pitan (2017) found analytical, problem solving and interpersonal skills to be the most important employability skills desired by employers of fresh graduates of social science, medical science, agricultural science, pure science, arts and engineering.

In a similar study by Khodier and Nessim (2019), interpretation, empathy, self-trust, negotiation, adaptability and career orientation were found to be the most important employability skills for Architecture education fresh graduates. Also, Attri and Kushwaha (2018) in a study designed to fit industry needs of business management students, considered employability skills and personality traits to include self-motivation skills, communication skills, participation in industry live projects, co-curricular activities, educational background, family background, geographical background and work experience. Okunuga and Ajeyalemi (2018) found important employability skills expected from fresh chemistry graduates to be teamwork, communication, organising, planning, decision making, leadership, problem solving, management, information technology, self-motivation, innovative skills, creative skills, time management, computer literacy, ability to manipulate, instruments, investigative,

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observational, production, quality control, entrepreneurial skills.

Bhatti *et al*. (2022) found highly required employability skills for business graduates to be organizational skills, entry-level digital skills, problem-solving skills, team work, subject-related skills, goal-oriented characteristics, communication capabilities, decision-making abilities and creativity. While practice based skills was reported by Moyo and Ozgit (2022) to be the most important employability skills required for tourism and hospitality management graduates. Clearly, employability skills and personality traits have been expressed and grouped differently in previous researches. Table 1 presents synthesis of these skills into groups that cover several of the employability skills.

Table 1: Synthesized Employability Skills from Previous Studies

	Adebakin *et al*. (2015)	Pitan (2017)	Khodier and Nessim (2019)	Attri and Kushwaha (2018)	Okunuga and Ajeyalemi (2018)	Bhatti *et al.* (2022)	Moyo and Ozgit (2022)
Self-motivation skills				✓		✓	
Industry interaction	✓		✓	✓	✓		✓
Critical thinking	✓	✓	✓		✓	✓	✓
Communication skills	✓	✓	✓	✓	✓	✓	✓
Computer literacy skills				✓			
Self-confidence skills				✓			
Interpersonal skills				✓			
Entrepreneurial skills	✓	✓	✓		✓	✓	

RESEARCH METHODOLOGY

Data Collection

The study employed a quantitative research approach. It involved an extensive review of extant literature, data collection via a questionnaire survey and, data analysis using Pearson correlation and multiple regression. The extensive review of extant literature was conducted to identify employability skills reported in literature. The identified employability skills were synthesized into eight (8) groups (as shown in Table 1) in order to achieve coherence. These eight groups of employability skills were then used in developing the study's questionnaire.

Questionnaires have been widely acknowledged as an efficient way to find out facts about a research sample, including their opinions and views relating to a given subject matter (Bashir, 2013; Enshassi, 2019). For this study, the targeted research sample was registered quantity surveying consultancy firms in Nigeria. The population of quantity surveying consultancy firms registered with the Quantity Surveyors Registration Board of Nigeria (QSRBN) as at the first quarter of year 2022, totaled up to 338. Making use of Yamane (1986) sample size formula, the sample size for the study was thus, computed as 77. However, as Salkind (1997) recommends that "when mailing out surveys or questionnaires, count on increasing the sample by about 40% to account for lost mail and uncooperative subjects", a total of 108 questionnaires were self-administered, instead of the minimum of 77 set as the sample size. A simple random sampling technique was used to administer the questionnaires to quantity surveying consultancy firms in Nigeria. Out of the 108 administered questionnaires, a total of 81 (representing 75%) were retrieved and found properly completed and useable for analysis.

The administered questionnaire comprised two sections, the first section requested demographic information of respondents that responded on behalf of a quantity surveying consultancy firm (as shown in Table 2). The second section on the other hand requested respondents to indicate the level to which each employability skill influence/is considered important in addition to basic competencies for the placement package received by a graduate quantity surveyor at the initial time of employment by their firm/organization. The respondents were required to provide this assessment by firstly, indicating a fresh graduate quantity surveyor's initial placement package in their firm and then secondly, on a 0 to 5 Likert scale, provide the extent to which each employability skill influence/is considered important for the placement package indicated. Where 0 signified no influence and 5 signified very high influence. This is because several Likert scales have been found to be useable, which include 4, 5, 6, 9 and 11 according to Tanujaya *et al*. (2022).

Data Analysis

Similar to previous studies (Attri & Kushwaha, 2018), Two-tailed Pearson's correlation analysis was used to determine the type of linear relationship (i.e., direction and strength) that all the employability skills demonstrate against the placement package received by a fresh graduate quantity surveyor. While multiple regression was used to measure the level of influence each employability skill has on the placement package received.

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Table 2: Respondent's Demographic Information

Variable	Frequency	Percentage
Educational qualification		
BSc/HND	30	37
MSc	39	48
PhD	12	15
Professional registration status		
Probationer member	4	5
Corporate member	59	73
Fellow	18	22
Years of practice experience		
1-5 years	5	6
6-10 years	31	38
11-15 years	26	32
Above 15 years	19	23
Rank/management position		
Strategic	35	43
Middle	46	57
Operational	0	0

RESULTS

Nature of Relationship between the Placement Package and Employability Skills

Table 3 presents Pearson correlation coefficient (r) conducted to determine the direction, and strength of the relationship between graduate quantity surveyor's placement package and employability skills.

Table 3: Relationship between graduate quantity surveyor's placement package and employability skills

Variables	Correlation Coefficient (*P*)	Significance Level (2-tailed)
Self-motivation skills	.617**	0.000
Industry interaction	.675**	0.000
Critical thinking	.640**	0.000
Communication skills	.231*	0.038
Computer literacy skills	.272*	0.014
Self-confidence skills	.430**	0.000
Interpersonal skills	.297**	0.007
Entrepreneurial skills	.411**	0.000

As presented in Table 3, the correlation test revealed a positive relationship between the dependent and independent variables, where; a strong positive correlation (r=0.617, p=0.000) was observed between self-motivation skills and the placement package received by graduate quantity surveyor. A strong positive correlation was also observed between industry interaction and the placement package received by a graduate quantity surveyor (r=0.675, p=0.000). Another strong positive correlation was observed between critical thinking and the placement package received by graduate quantity surveyors (r=0.640, p=0.000). A weak positive correlation was portrayed between communication skills and the placement package received (r=0.231, p=0.038). A weak positive correlation was also portrayed between computer literacy skills and the placement package received (r=0.272, p=0.014). A moderate positive correlation was observed between self-confidence skills and the placement package received by graduate quantity surveyors (r=0.430, p=0.000). Interpersonal skills had a weak positive correlation (r=0.297, p=0.007) with the placement package received. Finally, a moderate positive correlation (r=0.411, p=0.000) was seen between entrepreneurial skills and the placement package received by graduate quantity surveyors.

Employability Skills Influencing Quantity Surveying Graduates' Placement in Consultancy Firms

Multiple regression analysis was utilized to assess the impact of employability skills and personality traits (self-motivation skills, industry engagement, critical thinking, communication skills, computer literacy skills, self-confidence skills, interpersonal skills, and entrepreneurial skills) on the placement package fresh graduate quantity surveyors receive in consultancy firms. The result of the regression analysis carried out using the step-wise selection procedure at a significance level of 5% is presented in Tables 4 and 5.

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Table 4: Fitted Regression Model Summary

Model	R	R Square	Adjusted R Square	R Square Change	Std. Error of the Estimate
1	.675[a]	0.455	0.448	0.455	26657.757
2	.729[b]	0.532	0.520	0.076	24873.717
3	.757[c]	0.573	0.556	0.041	23905.863

a. Predictors: (Constant), Industry interaction
b. Predictors: (Constant), Industry interaction, Self-motivation skills
c. Predictors: (Constant), Industry interaction, Self-motivation skills, Entrepreneurial skills
d. Dependent Variable: Package Received

As shown in Table 4, the stepwise selection process was iterated through three steps. In the first step, Industry Interaction was selected as it had an (R^2) of 0.455 explaining 45.5% of the total variation in the response variable. In the second step, Self-motivation skills was included as it increased the percentage variance explained (R^2) by 7.6%, amounting to a total of 53.2% of variation in the response variable explained. In the third step, Entrepreneurial skills increased the percentage variance explained by 4.1%, and so it was added to the model, amounting to a total of 57.3%. In the fourth step, no variable was added as the remaining potential influential variables did not improve the model according to the chosen inclusion criterion of an increase in R^2 at a 5% significance level.

The final fitted model, as shown in Table 4, comprised three influential variables; industry interaction, self-motivation skills and entrepreneurial skills. As indicated by the final fitted model's coefficient of determination (R^2), 57.3% of the total variation in placement package was explained by the model.

Table 5: Multiple Regression Coefficients Output

Coefficients

Model		Standardized Coefficients	t	Sig.	Collinearity Statistics
		Beta			VIF
1	(Constant)		-4.797	0.000	
	Industry interaction	0.406	4.264	0.000	1.634
	Self-motivation skills	0.341	3.726	0.000	1.512
	Entrepreneurial skills	0.215	2.728	0.008	1.120

a. Dependent Variable: Package Received

As shown in Table 5, the standardized regression coefficients further indicate the level of influence each predictor has on placement package received. Industry interaction had the most statistically significant influence on the placement package received by a fresh graduate quantity surveyor, as it had the largest standardized coefficient i.e. **0.406**. Self-motivation skills had the second most statistically significant influence on placement package received, with standardized coefficient of **0.341.** While Entrepreneurial skills at **0.215** standardized coefficient, had the least statistically significant influence on placement package received. The low variance inflation factor scores VIF (scores less than 2) of **1.634**, **1.512** and **1.120** for industry interaction, self-motivation skills and entrepreneurial skills respectively, from the multiple regression coefficients table, confirms that there is no multicollinearity among the independent variables (Dascula & Cozma, 2009).

DISCUSSION

The results of the multiple regression analysis conducted revealed that even though a positive relationship exist between placement package received by fresh graduate quantity surveyors and employability skills and personality traits (self-motivation skills, industry engagement, critical thinking, communication skills, computer literacy skills, self-confidence skills, interpersonal skills, and entrepreneurial skills), only three amongst these skills and personality traits, namely; industry interaction, self-motivation skills and entrepreneurial skills have very strong influence on placement package received by a fresh graduate quantity surveyor. This suggests that in addition to basic competencies, employers of graduate quantity surveyors desire a blend of employability skills in a graduate quantity surveyor, with three employability skills (industry interaction, self-motivation skills and entrepreneurial skills), being the most desirous in the blend. This corroborates previous studies (Pitan, 2017; Khodier & Nessim, 2019; Attri & Kushwaha,

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2018; Okunuga & Ajeyalemi, 2018; Bhatti *et al*., 2022; Moyo & Ozgit, 2022) whose findings all demonstrated that a specific blend of employability skills is desired by employers of different categories of graduates.

This study revealed industry interaction, self-motivation skills and entrepreneurial skills as employability skills considered most important in addition to basic competencies for gainful employment by employers of fresh quantity surveying graduates. This contradicts the skills Pitan (2017) show to be considered most important by employers of fresh graduates of social science, medical science, agricultural science, pure science, arts and engineering. It also contradicts employability skills Khodier and Nessim (2019) revealed to be most important to facilitate gainful employment from employers of fresh graduates of architecture education. It however, agrees with Attri and Kushwaha (2018) and Bhatti *et al*. (2022) that self-motivation skills and industry interaction are important employability skills for gainful employment of fresh graduates. The significant contradictions in employability skills that appeared most important for gainful employment of graduate quantity surveyors in this study, with those of science, arts, engineering, architecture education and business management graduates revealed in previous studies, clearly reinforces the recognition in literature (Brint *et al*., 2008; Simmons *et al*., 2017; Ahmadu *et al*., 2021) that disciplines/majors vary in numerous ways such as in terms of cultures of engagement.

CONCLUSION

This study contributes to existing attempts to ensure quantity surveying graduates are work ready and gainfully employable by unravelling precise blend of employability skills required in addition to basic competencies by fresh graduate quantity surveyor's employers.

Employability skills were identified from literature and the ones considered most important in addition to basic competencies, for gainful employment by employers of fresh quantity surveying graduates were determined via Pearson correlation and multiple regression analysis. Essentially, industry interaction, self-motivation skills and entrepreneurial skills were found to be the employability skills considered most important for gainful employment by employers of fresh quantity surveying graduates. From a practical perspective, the study's findings can be used by quantity surveying education authorities as a basis to further consolidate their teaching plans and ensure fresh quantity surveying graduates are fully work ready and gainfully employable. Also, because this study was limited to only consultancy firms' further study could be conducted for other categories of fresh graduate quantity surveying employers such as contracting organisations and public organisations.

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